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" Gestion des insectes ravageurs des cultures et vecteurs de maladies pour un environnement viable et une sécurité alimentaire en Afrique: Développements courants"

"Insect pest and vector management for sustainable environment and food security in Africa: Current developments"

Programme

Assessment of yield losses due to the natural Infestation of tomato, *Lycopersicon esculentum* Mill, by the leafminers, *Liriomyza* spp. in Central Sudan.

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The leafminer (LM), *Liriomyza* spp. (Diptera: Agromyzidae) is known to attack tomato crops in the Gezira all year around. The effect of such infestation was not tackled researches in the Sudan. This study was done at the Experimental Farm of the Faculty of Agricultural Sciences, University of Gezira on the tomato variety Peto 86 (season 1996/97) and the breeding line Wad El-Obaid (season 1997/98). One experiment was conducted for each. Two treatments (i.e. insecticide-treated and untreated) were laid out in a RCB design with six replicates. The untreated plots were left to the LMs natural infestation, while the treated plots were protected by the IGR Trigard 75% WP. Highly significant differences ($P<0.01$) in percentage of leaf infestation were correlated with the highly significant differences in yield between treated and untreated plots. Differences in leaf infestation of *ca*. 48% in plots of the tomato variety Peto 86 resulted in a yield loss of approximately 44%, compared to 43% loss in yield of Wad El-Obaid, where the percentage of leaf infestation was *ca*. 56%. Therefore, it is recommended that tomato crop should be treated with insecticides to reduce the effect of the LMs.

Key words: Yield loss, Tomato, Diptera, natural infection, Sudan

Yield losses due to the natural infestation of faba bean, *Vicia faba* L., by the leaf miners, *Liriomyza* spp. in Central Sudan.

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This study was carried out at the Experimental Farm of the Faculty of Agricultural Sciences, University of Gezira, during the seasons 1996/97 and 1997/98, on two faba bean varieties: Shambat and SML. Two experiments were conducted: one for each variety where two treatments were laid out in a randomized complete block design with six replicates. One treatment was the natural infestation of leaf miners (untreated plots), and the other was protected by the insect growth regulator Trigard 75% wettable powder (treated). In both seasons, the untreated plots were heavily infested by the leaf miners, while the protected plots were lightly infested. Infestation resulted in yield losses of 22.86% and 42.25% for Shambat and 29.16% and 27.64% for SML during the two seasons, respectively. Also, there were highly significant differences ($P<0.01$) in plant height and number of pods between the treated and the untreated plots. Negative correlations between the percentage of leaf infestation and plant height in the treated plots were detected.

Key words: Yield loss, Tomato, Diptera, natural infection, Sudan

The abundance and distribution of the Mediterranean fruit fly, *Ceratitis capitata,* (Diptera: Tephritidae), in late Valencia citrus orchards in Ghana.